CHAPTER III

RESEARCH METHODOLOGY

This chapter covers study design, population and sample, research tools, reliability and validity tools, data collecting and analysis techniques, and research instruments.

1.1 Research Design

The research design used in this study was quantitative with quasi-experimental. In two classes, two groups were chosen. a pre-test was conducted before treatment. After the pre-test and treatment, a post-test was conducted.

The pre-test and post-test reports of the experimental class and the control class was compared and observed to determine if there is a significant difference in teaching reading narrative texts with and without using comic strip as a media learning. Furthermore, the design model of this study can be classified as follows:

Table 1 The Design of The Research

Group	Pre-test	Treatment	Post-test
Experiment group	O_1	X	O_2
Control group	O_3	-	O_4

Explanation:

O_1: pre-test in the experimental class

O_3: pre-test in the control class

X: Treatment

O_2: post-test in the experimental class

O_4: post-test in the control class

1.2 Population and Sample

The population of the study were eleventh-grade students of SMA Bahrul Ulum Bontang which consists of 4 classes with a total number of eleventh-grade students as many as 110 students.

The sample was selected by using the convenience sampling technique. The sample of this research applied 2 groups and the number of each class was 22 students. The classes taken for this study were divided into one group as a control class taught without comic strips as a media of understanding narrative texts and another group as an experimental class taught with comic strips as a media of understanding narrative texts.

1.3 Research Instruments

The instrument in this study is defined as a device for measuring the present value of a quantity through a reading comprehension test. The test were 10 multiple choices for the pretest and post-test. The score of multiple choices is 10 for each correct item and 0 for the incorrect item. To give the test, the researcher adopted the test with using comic strip from previous study (Anida, 2019).

1.4 Reliability and Validity of Instruments

The test used in this study adopted the test from Anida (2019) because the test has been carried out in previous research that has passed the reliability and validity check process so that it is not necessary to carry out reliability and validity checks for use in this study because the test has been proven to be reliable and valid.

1.5 Technique of Data Collection

Students were sorted into an experimental group and a control group by the researcher. Each class had 10 meetings where the teaching and learning activities took place. The first meeting's pretest was given by both classes. The definition of narrative texts is then discussed throughout the second through third meetings in the experimental class. Purpose, social function, language feature, general structure, characteristics (types of narrative texts), and narrative text examples were all covered. From the fourth through the ninth meetings, reading comprehension assignments were given along with explanations, discussions, and comic strip media. In contrast, the researcher does not use comic strips to teach reading comprehension in the control group's fourth through ninth meetings. A post-test was administered for both the experiment and control groups at the most recent meeting.

1.5.1 Pretest

The control and experimental group were tested before handling in the classroom. The purpose of the pretest was to gain information about the students' comprehension specifically of the narrative. The test consisted of 10 multiple-choice questions.

1.5.2 Treatment

Each class was treated in 8 meetings. The experimental class by using through comic strips to understand the narrative texts, and the control class was treated without comic strips.

Table 2 Steps in Conducting The Class

Meeting	Activity
	Experimental
1st meeting	Pretest
2nd meeting	Explanation of: • Definition of narrative texts • Purpose • Generic structure
3rd meeting	Explanation of: • Language feature • Types of narrative texts • Social function • Example
4th meeting	Discuss narrative texts using comic strips Title: Batu Menangis
5th meeting	Discuss narrative texts using comic strips Topic: Malin Kundang
6th meeting	Discuss narrative texts using comic strips Topic: Beowulf
7th meeting	Discuss narrative texts using comic strips Topic: The Mousedeer and Crocodile
8th meeting	Discuss narrative texts using comic strips Topic: Lion and The Mouse
9th meeting	Discuss narrative texts using comic strips Topic: Danau Toba
10th meeting	Post-test

1.5.3 Post-Test

For the students, the researcher administered a post-test. The test's goal was to compare the experimental class with the comic treatment to the control class without comics to see how they differed. There were ten multiple-choice questions about narrative texts in the test.

1.6 Technique of Data Analysis

As for the value of students assessment results by using the following formula:

Students' assessment results = $\frac{correct\ answers\ score}{total\ number\ of\ questions} \times 100$

1.6.1 Central Tendency: Mean, Mode and Median

The central tendency could be a way of describing what's typical in a very dataset. It takes 3 main measures: mean, median, and mode.

1. Determining the mean score

$$\mathbf{M}\boldsymbol{x} = \frac{\sum \boldsymbol{x}}{\mathbf{N}}$$

Description:

M$\boldsymbol{x}$: Mean score

$\sum \boldsymbol{x}$: The total score of the students

N: The total students

1.6.2 Dispersion: Range and Variance (standard deviation)

The square root of the variance, or SD, is seen to be a more accurate way to describe dispersion than the difference between extreme scores (known as outliers). As a result of the assumption that continuous knowledge comes from a widely spread population, SD is a crucial concept to comprehend. This can be a bell-shaped idealized or standard distribution with a mean of zero and a typical deviation of one. In SPSS outputs and data tables, SD is encapsulated.

1. Determining the standard deviation

$$SD = \sqrt{\frac{\Sigma x^2}{n}}$$

Description:

SD : Standard devitiation

$\sum x^2$: Sum of squared gained score

n: Total students

1.6.3 T Test Formula

The T-test formula aims to estimate the true difference between the means of two samples by using the ratio of the difference in the group mean to the combined standard error of the two samples. This statistical sample data can be used by the SPSS application, excel, and also calculate manually using the T-Test calculation formula below:

$$\mathbf{t} = \frac{Mx - My}{\sqrt{\left(\frac{\Sigma x^2 + \Sigma y^2}{Ny + Nx - 2}\right) + \left(\frac{1}{Nx} + \frac{1}{Ny}\right)}}$$

Description:

Mx: Mean score of the experiment group.

My: Mean score of the control group.

Σx^2: The total score obtained by the students in the experiment

group.

$\boldsymbol{\Sigma y^2}$: The total score obtained by the students in the control group.

Nx: The total students existed in the experiment group.

Ny: The total students existed in the control group.

Null hypothesis is accepted if t value is lower than t table. If t value is greater than t table then the null hypothesis is rejected.